

Appl. No.: 10/731,829
Amtd. dated 10/04/2005
Reply to Office action of April 4, 2005

Remarks

Following the response to the election requirement, claims 1-3, 5, 12, 13, 17-21, 23, 30, 31, 35, 36 and 38-41 were examined with claims 4, 6-11, 14-16, 22, 24-29, 32-334, 37, 42, 43 being withdrawn from further consideration. As noted in the response to the election requirement, claims 1-3, 12, 13, 17-21, 30, 31, 35, 36 and 39-41 are generic claims with claims 5, 23 and 38 being drawn to the elected species of figure 6. Although the independent claims have been amended as described below, the amendments are for purposes of clarification and claims 1-3, 12, 13, 17-21, 30, 31, 35, 36 and 39-41 remain generic.

The Official Action objects to the specification and requested that the missing application number be provided. As the application number of the co-pending application has now been assigned, the paragraph beginning on page 9, line 4 of the specification has been amended to include the missing application number. As such, the objection to the specification is overcome.

The Official Action also objects to claim 17 for its reference to "third and fourth conductive elements" in conjunction with the second backplane. Claim 17 has now been amended to recite that the second backplane has fifth and sixth conductive elements, thereby overcoming the objection to claim 17. As a result to the amendment of independent claim 17, dependent claims 22-24, 28, 29 and 32-34 have been similarly amended. In this regard, it is noted that even though claims 22, 24, 28, 29 and 32-34 are withdrawn, they have been amended so as to be in condition for allowance upon the allowance of independent claim 17 in its generic form. The Official Action also objected to the dependencies of claims 32 and 34 which have now also been corrected so as to depend from claim 17. As such, the objections to claims 17-34 have been overcome.

The Official Action also rejects claims 1-3, 5, 12, 13, 17, 18, 21, 23, 30 and 31 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,554,639 to John Doriski, Jr. Further, the Official Action rejects claims 19, 20, 35, 36 and 38-41 under 35 U.S.C. § 103(a) as being unpatentable over the Doriski '639 patent. As described in detail below, independent claims 1, 17 and 35 have been amended to further clarify the

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claimed invention and to additionally patentably distinguish the claimed invention from the cited reference. Based on the foregoing amendments and the following remarks, Applicants respectfully request reconsideration to the present application and allowance of the amended set of claims.

Independent claim 1 is directed to an integration area for providing interconnections. As recited, independent claim 1 includes a plurality of component connection receptacles, a plurality of first conductive elements extending from each component connection receptacle and a plurality of second conductive elements. Each second conductive element extends across at least one first conductive element as shown, for example, by elements 32 and 36 in figures 2 and 3. As also recited by independent claim 1, the integration area includes a plurality of connections between the first and second conductive elements to provide interconnections. As now amended, the plurality of connections are established at those locations at which the second conductive elements extend across the first conductive elements. As shown in the embodiment of figure 6 and as further recited by dependent claim 5, for example, the plurality of connections between the first and second conductive elements may include a plurality of connection vias (see, for example, element 70 in figure 6) that extend between the first and second conductive elements and a plurality of solder patches (see, for example, element 72 in figure 6) with each solder patch connecting at least two of the connection vias.

The Doriski '639 patent describes a wiring interface in which wire separation categories are assigned for panel connections and one or more separation dedicated connectors are assigned for each category. The separation dedicated connectors are connected via integration wire bundles.

The Official Action references figure 3b of the Doriski '639 patent in conjunction with the extension of the second conductive elements across the first conductive elements as recited by independent claim 1. It is initially noted that figure 3b, as well as a number of the other figures of the Doriski '639 patent, are relatively high level wiring diagrams that do not generally necessarily depict the physical orientation of any one conductor to another conductor. Nonetheless, to the extent that the Doriski '639 patent, such as figure 3b, depicts second conductive elements extending across first conductive elements, the

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Doriski '639 patent does not teach or suggest that the first and second conductive elements are interconnected "at those locations at which said second conductive elements extend across said first conductive elements," as now recited by amended independent claim 1.

Indeed, with reference to figure 3b of the Doriski '639 for purpose of example, it is noted that the various conductors are shown to cross other conductors at those locations at which one of the crossing conductors is shown to be arched, thereby graphically representing the arched conductor crossing over the underlying conductor. As such, at those points at which the various conductors cross one another in the Doriski '639 patent, the conductors are not interconnected and, instead, are purposefully isolated from one another as represented by the arching of one of the conductors. In fact, the only connections disclosed by the Doriski '639 patent are various splices, designated as SP1, SP2, etc. in figure 3b, for example. These splices do provide connection between conductors, but not conductors that extend across one another as recited by the claimed invention. Instead, the splices appear to connect a wire to one of the conductors where the wire is then pulled out to the side relative to the path of the conductor. Accordingly, the Doriski '639 patent does not teach an integration area as recited by amended independent claim 1 in which each second conductive element extends across at least one first conductive element and connections are established at those locations at which the second conductive elements extend across the first conductive elements.

Independent claims 17 and 35, as amended, also include comparable recitations and are therefore not taught or suggested by the Doriski '639 patent for at least the same reasons as described above in conjunction with amended independent claim 1. Thus, the rejection of independent claims 1, 17 and 35 is therefore overcome.

Since the dependent claims include the recitations of a respective independent claim, the dependent claims are therefore also patentably distinct from the Doriski '639 patent for at least the same reasons as described above in conjunction with the respective independent claims. However, a number of the dependent claims also include additional recitations that are not taught or suggested by the Doriski '639 patent and that therefore provide additional patentable distinctions. For example, dependent claims 5, 23 and 38

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define the plurality of connections between the first and second conductive elements to include a plurality of connection vias and a plurality of solder patches with each solder patch connecting at least two of the connection vias. While the Official Action points to figures 3a and 3b of the Doriski '639 patent relative to these dependent claims, it is submitted that the Doriski '639 patent, including figures 3a and 3b, does not define the connections between the first and second conductive elements to include a plurality of connection vias with solder patches connecting at least two of the connection vias.

Additionally, dependent claim 39 further recites that connections are automatically made at at least one of the connection points based upon a configuration of connections that is received. The Doriski '639 patent does not teach or suggest automatically making connections as recited by dependent claim 39. In addition, the Doriski '639 patent does not teach or suggest connecting first and second backplanes as recited by dependent claims 40 and 41. Thus, dependent claims 5, 23 and 38-41 are also not taught or suggested by the Doriski '639 patent for each of these additional reasons. As described above, the rejections of the dependent claims are therefore also overcome.

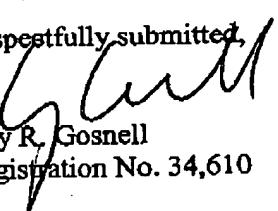
CONCLUSION

In view of the amendments and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

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It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

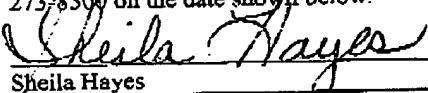
Respectfully submitted,


Guy R. Gosnell
Registration No. 34,610

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the US Patent and Trademark Office at Fax No. (571) 273-8300 on the date shown below.


Sheila Hayes

October 4, 2005

Date